

Abstract

Described herein are methods for increasing the amount of protein secreted by a cell. In one case, a cell is provided which contains a heterologous nucleic acid encoding a protein having unfolded protein response modulating activity and a heterologous nucleic acid encoding a protein of interest to be secreted. In one case, the protein having unfolded protein response modulating activity is selected from the proteins selected from the group consisting of HAC1, PTC2 and IRE1. The protein of interest can be any secreted protein such as a therapeutic or an industrial enzyme. For example the protein can be selected from the group consisting of lipase, cellulase, endo-glucosidase H, protease, carbohydrase, reductase, oxidase, isomerase, transferase, kinase, phosphatase, alpha-amylase, glucoamylase, lignocellulose hemicellulase, pectinase and ligninase.